

CLAIMS

What is claimed is:

1 1. A method for verifying possession of a user code by a user using a data entry terminal,
2 the method comprising the steps of:

3 (a) generating a scramble key;
4 (b) providing the scramble key to the user and prompting the user to generate an input
5 code by modifying the user code in accordance with the scramble key; and
6 (c) receiving the input code from the user.

1 2. The method of claim 1, further comprising the steps of:

2 (d) determining whether the user used the user code to generate the input code; and
3 (e) permitting access by the user of an account associated with the user accordance with
4 the determination of step (d).

5 3. The method of claim 2, wherein:

6 step (d) comprises the step of determining whether the user used the user code to
7 generate the input code by comparing the input code received from the user to an
 expected input code, wherein the expected input code is a scrambled input code
 produced by modifying the user code in accordance with the scramble key; and
 step (e) comprises the step of permitting access by the user of the account associated with
 the user only if the input code matches the expected input code.

1 4. The method of claim 1, wherein the data entry terminal is a public telephone.

1 5. The method of claim 4, wherein:

2 said scramble key is a random scramble key generated in response to activation by the
3 user; and
4 activation by the user comprises the user placing a charge telephone call; and
5 further comprising the steps of:

6 (d) determining whether the user used the user code to generate the input code; and
7 (e) placing the telephone call and charging the telephone call to an account associated
8 with the user code only if the user is determined to have used the user code to
9 generate the input code.

1 6. The method of claim 1, wherein step (a) comprises the steps of:
2 (1) accessing the user code from a database; and
3 (2) generating a random difference value for at least one digit of the user code,
4 wherein if the difference value for a digit of the at least one digit is
5 positive then the digit plus the difference value is not greater than 9 and if
6 the difference value for the digit is negative then the digit minus the
7 difference value is not less than 0, wherein said scramble key comprises
8 said random difference values.

1 7. The method of claim 6, wherein the user code is a personal-identification number
2 (PIN) code.

1 8. The method of claim 6, wherein step (b) comprises the step of:
2 (1) for at least one digit of the user code, prompting the user to add or subtract the
3 difference value of the scramble key from each of the at least one digits, in
4 accordance with whether the difference value is positive or negative.

1 9. An apparatus for verifying possession of a user code by a user using a data entry
2 terminal, the apparatus comprising:
3 (a) means for generating a scramble key;
4 (b) means for providing the scramble key to the user and prompting the user to generate
5 an input code by modifying the user code in accordance with the scramble key;
6 and
7 (c) means for receiving the input code from the user.

1 10. The apparatus of claim 9, further comprising:

2 (d) means for determining whether the user used the user code to generate the input code;

3 and

4 (e) means for permitting access by the user of an account associated with the user

5 accordance with the determination of means (d).

1 11. The apparatus of claim 10, wherein:

2 means (d) comprises means for determining whether the user used the user code to
3 generate the input code by comparing the input code received from the user to an
4 expected input code, wherein the expected input code is a scrambled input code
5 produced by modifying the user code in accordance with the scramble key; and
means (e) comprises means for permitting access by the user of the account associated
with the user only if the input code matches the expected input code.

12. The apparatus of claim 9, wherein the data entry terminal is a public telephone.

13. The apparatus of claim 12, wherein:

said scramble key is a random scramble key generated in response to activation by the
user; and

activation by the user comprises the user placing a charge telephone call; and

the apparatus further comprising:

(d) means for determining whether the user used the user code to generate the input code;

and

(e) means for placing the telephone call and charging the telephone call to an account
associated with the user code only if the user is determined to have used the user
code to generate the input code.

14. The apparatus of claim 9, wherein means (a) comprises:

(1) means for accessing the user code from a database; and

(2) means for generating a random difference value for at least one digit of the

4 user code, wherein if the difference value for a digit of at least one
5 digit is positive then the digit plus the difference value is not greater than
6 9 and if the difference value for the digit is negative then the digit minus
7 the difference value is not less than 0, wherein said scramble key
8 comprises said random difference values.

1 15. The apparatus of claim 14, wherein the user code is a personal-identification number
2 (PIN) code.

1 16. The apparatus of claim 14, wherein means (b) comprises means for prompting the
2 user to add or subtract, for at least one digit of the user code, the difference value of the scramble
3 key from each of the at least one digits, in accordance with whether the difference value is
4 positive or negative.

1 17. A computer-readable medium having stored thereon a plurality of instructions for
2 verifying possession of a user code by a user using a data entry terminal, wherein the plurality of
3 instructions, when executed by a processor, cause the processor to perform the steps of:

4 (a) generating a scramble key;
5 (b) providing the scramble key to the user and prompting the user to generate an input
6 code by modifying the user code in accordance with the scramble key; and
7 (c) receiving the input code from the user.

1 18. The computer-readable medium of claim 17, wherein said plurality of instructions
2 cause the processor to perform the further steps of:
3 (d) determining whether the user used the user code to generate the input code; and
4 (e) permitting access by the user of an account associated with the user accordance with
5 the determination of step (d).

1 19. The computer-readable medium of claim 19, wherein:
2 step (d) comprises the step of determining whether the user used the user code to

3 generate the input code by comparing the input code received from the user to an
4 expected input code, wherein the expected input code is a scrambled input code
5 produced by modifying the user code in accordance with the scramble key; and
6 step (e) comprises the step of permitting access by the user of the account associated with
7 the user only if the input code matches the expected input code.

1 20. A propagated computer data signal transmitted via a propagation medium, the
2 computer data signal comprising a plurality of instructions for verifying possession of a user
3 code by a user using a data entry terminal, wherein the plurality of instructions, when executed
4 by a processor, cause the processor to perform the steps of
5 (a) generating a scramble key;
6 (b) providing the scramble key to the user and prompting the user to generate an input
7 code by modifying the user code in accordance with the scramble key; and
8 (c) receiving the input code from the user.

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